

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: **LIND, Peter; TORSTEN, Sejlitz; VOGELI, Gabriel; and WOOD, Linda S.**

Serial No.: **Not yet assigned** Group Art Unit: **Not yet assigned**

Filed: **Concurrently herewith** Examiner: **Not yet assigned**

Title: **POLYNUCLEOTIDES ENCODING G PROTEIN-COUPLED RECEPTORS**

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**INFORMATION DISCLOSURE STATEMENT**

**S I R :**

Pursuant to 37 C.F.R. §§ 1.97 and 1.98 and to the duty of disclosure set forth in 37 C.F.R. § 1.56, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the attached PTO-1449 and PTO-892 forms submitted herewith.

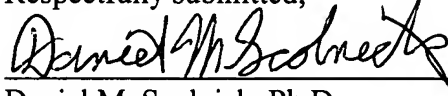
Although the information submitted herewith may be "material" to the Examiner's consideration of the subject application, this submission is not intended to constitute an admission that such information is "prior art" as to the claimed invention.

Copies of the references cited on the attached PTO-1449 and PTO-892 forms can be found in the parent case, U.S. Serial No. 09/852,165, filed May 8, 2001.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

No first Official Action has yet been received and it is presumed that none has yet been mailed. No fee or certification is required. 37 C.F.R. § 1.97(b).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Daniel M. Scolnick", is written over a horizontal line.

Daniel M. Scolnick, Ph.D.

Regis. No. 52,201t

Enclosures:

PTO-1449 (22 sheets)

PTO-892 (2 sheets)

Dated: October 28, 2003

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<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. <b>PHRM-0442</b>	Serial No. <b>09/852,165</b>
		Applicant <b>Peter Lind et al.</b>	
		Filing Date <b>May 8, 2001</b>	Group <b>Not Yet Assigned</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	AA	Akane, A., et al., "Direct dideoxy sequencing of genomic DNA by ligation-mediated PCR," <i>Biotechniques</i> , 1994, 16(2), 238-241 (page 239 - advertisement)	
	AB	Altschul, S. F., et al., "Basic local alignment search tool," <i>J. Mol. Biol.</i> , 1990, 215, 403-410	
	AC	American Veterinary Medical Association, <i>Report of the American Veterinary Medical Assoc.</i> , Panel on Euthanasia, <i>Journal of American Veterinary Medical Assoc.</i> , 1993, 202, 229-249	
	AD	Anderson, W. F., "Human gene therapy," <i>Science</i> , 1992, 256, 808-813	
	AE	Anderson, W.F., "Human gene therapy," <i>Nature</i> , Supplement to Vol. 392(6679), 1998, 25-30	
	AF	Aujame, L., et al., "High affinity human antibodies by phage display," <i>Human Antibodies</i> , 1997, 8(4), 155-168	
	AG	Aukrust, P., et al., "Enhanced levels of soluble and membrane-bound CD40 ligand in patients with unstable angina; Possible Reflection of T lymphocyte and platelet involvement in the pathogenesis of acute coronary syndromes," <i>Circulation</i> , 1999, 100, 614-620	
	AH	Ausubel, et al. (Eds.), "Chapter 6, Screening of recombinant DNA libraries," <i>Current Protocols in Molecular Biology</i> , 1994, John Wiley & Sons, 6.0.1-6.4.10	
*	AI	Ausubel, et al. (Eds.), <i>Current Protocols in Molecular Biology</i> , New York, 1987-1999, John Wiley & Sons, Inc.	
	AJ	Baindur, N., et al., "Selective fluorescent ligands for pharmacological receptors," <i>Drug Dev. Res.</i> , 1994, 33, 373-398	
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>	

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	AK	Benoist C., et al., "In vivo sequence requirements of the SV40 early promoter region," <i>Nature</i> , 1981, 290, 304-310	
*	AL	Berger, et al., <i>Guide to Molecular Cloning Techniques</i> , Methods in Enzymology 152, 1987, Academic Press, Inc., San Diego, CA	
	AM	Birney, E., et al., "PairWise and SearchWise: finding the optimal alignment in a simultaneous comparison of a protein profile against all DNA translation frames," <i>Nucleic Acids Res.</i> , 1996, 24(14), 2730-2739	
	AN	Bohm, S. K., et al., "Regulatory mechanisms that modulate signalling by G-protein-coupled receptors," <i>Biochem. J.</i> , 1997, 322, 1-18	
	AO	Bossé, R., et al., "Development of nonseparation binding and functional assays for G protein-coupled receptors for high throughput screening: Pharmacological characterization of the immobilized CCR5 receptor on FlashPlate®," <i>J. Biomolecular Screening</i> , 1998, 3(4), 285-292	
	AP	Breedon, L., et al., "Regulation of the yeast HO gene," <i>Cold Spring Harb. Symp. Quant. Biol.</i> , 1985, Vol. L, <i>Molecular Biology of Development</i> , 643-650	
	AQ	Broeck, V., "G-protein-coupled receptors in insect cells," <i>Int. Rev. Cytology</i> , 1996, 164, 189-268	
	AR	Bruggemann, M., et al., "Strategies for expressing human antibody repertoires in transgenic mice," <i>Immunol. Today</i> , 1996, 17(8), 391-397	
	AS	Bruggemann, M., et al., "Production of human antibody repertoires in transgenic mice," <i>Curr. Opin. Biotechnol.</i> , 1997, 8, 455-458	
	AT	Cane, D. E., et al., "Harnessing the Biosynthetic Code: Combinations, Permutations, and Mutations," <i>Science</i> , Oct. 1998, 282, 63-68	
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	AU	Capecchi, M. R., "Altering the genome by homologous recombination," <i>Science</i> , 1989, 244, 1288-1292	
	AV	Chambers, R. C., et al., "Thrombin stimulates fibroblast procollagen production via proteolytic activation of protease-activated receptor 1," <i>Biochem J.</i> , 1998, 333, 121-127	
	AW	Choo, Y., et al., "Promoter-specific activation of gene expression directed by bacteriophage-selected zinc fingers," <i>J. Mol. Biol.</i> , 1997, 273, 525-532	
	AX	Cicala, C., et al., "Bronchoconstrictor effect of thrombin and thrombin receptor activating peptide in guinea-pigs in vivo," <i>Br. J. Pharmacol.</i> , 1999, 126, 478-484	
	AY	Cirino, G., et al., "Thrombin functions as an inflammatory mediator through activation of its receptor," <i>J. Exp. Med.</i> , 1996, 183, 821-827	
*	AZ	Cobbold, et al., "Aequorin measurements of cytoplasmic free calcium," In: McCormack J.G., et al. (Eds.), <i>Cellular Calcium: A Practical Approach</i> , 1991, Oxford, IRL Press	
	BA	Cosman, D., et al., "Cloning sequence and expression of human interleukin-2 receptor," <i>Nature</i> , 1984, 312, 768	
	BB	Cosman, D., et al., "High Level Stable Expression of Human Interleukin-2 receptors in Mouse Cells Generates only Low Affinity Interleukin-2 Binding Sites," <i>Mol. Immunol.</i> , 1986, 23(9), 935-941	
	BC	<i>Current Protocols in Molecular Biology</i> , 1999, John Wiley & Sons, New York	
	BD	Dayoff, in <i>Atlas of Protein Sequence and Structure</i> , 1972, National Biochemical Research Foundation, Washington, D.C., 5, 124	
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	BE	Donovan, F. M., et al., "Thrombin induces apoptosis in cultured neurons and astrocytes via a pathway requiring tyrosin kinase and RhoA activities," <i>J. Neurosci</i> , 1997, 17(14), 5316-5326	
	BF	Dooley, C. T., et al., "Binding and in vitro activities of peptides with high affinity for the nociceptin/orphanin FQ receptor, ORL1," <i>J. Pharmacology and Experimental Therapeutics</i> , 1997, 283(2), 735-741	
	BG	Douglas, A. M., et al., "Direct sequencing of double-stranded PCR products incorporating a chemiluminescent detection procedure," <i>Biotechniques</i> , 1993, 14, 824-828	
	BH	Drmanac, R., et al., "DNA Sequence Determination by Hybridization A Strategy for Efficient Large-Scale Sequencing," <i>Science</i> , 1993, 260, 1649-1652 (sequencing by hybridization)	
	BI	Drmanac, S., et al., "Accurate sequencing by hybridization for DNA diagnostics and individual genomics," <i>Nature Biotechnology</i> , 1998, 16, 54-58	
*	BJ	Eisenthal, R., et al. (Eds.) In Enzyme Assays, <i>A Practical Approach</i> , 1992, Oxford University Press	
	BK	Fields, S., et al., "A novel genetic system to detect protein-protein interactions," <i>Nature</i> , 1989, 340, 245-246	
	BL	Fields, S., et al., "The two-hybrid system: an assay for protein-protein interactions," <i>Trends in Genetics</i> , 1994, 10(8), 286-292	
	BM	Fischer, S. G., et al., "DNA fragments differing by single base-pair substitutions are separated in denaturing gradient gels: Correspondence with melting theory," <i>Proc. Natl. Acad. Sci. USA</i> , 1983, 80, 1579-1583	
	BN	Foote, J., et al., Antibody framework residues affecting the conformation of the hypervariable loops," <i>J. Mol. Biol.</i> , 1992, 224, 487-499	
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	BO	Frandsen, E. K., et al., "A simple ultrasensitive method for the assay of cyclic AMP and GMP in tissues," <i>Life Sciences</i> , 1976, 18, 529-542	
	BP	Friedmann, T., "Progress toward human gene therapy," <i>Science</i> , 1989, 244, 1275-1281	
	BQ	George, S. E., et al., "Evaluation of a CRE-directed luciferase reporter gene assay as an alternative to measuring cAMP accumulation," <i>J. Biomolecular Screening</i> , 1997, 2(4), 235-240	
	BR	Gerhardt, C. C., et al., "Functional characteristics of heterologously expressed 5-HT receptors," <i>Eur. J. Pharmacology</i> , 1997, 334, 1-23	
	BS	Gill, J. S., et al., "Thrombin induced inhibition of neurite outgrowth from dorsal root ganglion neurons," <i>Brain Res.</i> , 1998, 797, 321-327	
	BT	Grabham, P., et al., "Thrombin receptor activation stimulates astrocyte proliferation and reversal of stellation by distinct pathways: involvement of tyrosine phosphorylation," <i>J. Neurochem</i> , 1995, 64, 583-591	
	BU	Greisman, H. A., et al., "A general strategy for selecting high-affinity zinc finger proteins for diverse DNA target sites," <i>Science</i> , 1997, 275, 657-661	
*	BV	Harlow, et al. (Eds.), <i>Antibodies A Laboratory Manual</i> , 1988, Cold Spring Harbor Laboratory; Cold Spring Harbor, New York	
	BW	Hauck, R. W., et al., "α-thrombin stimulates contraction of human bronchial rings by activation of protease-activated receptors," <i>Am J. Physiol</i> , 1999, 277, L22-L29	
	BX	Henikoff, S., et al., "Amino acid substitution matrices from protein blocks," <i>Proc. Natl. Acad. Sci. USA</i> , 1992, 89, 10915-10919	
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*	BY	Hershey, A. D., (Ed.), <i>The Bacteriophage Lambda</i> , 1973, Cold Spring Harbor Press, Cold Spring Harbor, New York	
	BZ	Hill, D. C., "Trends in development of high-throughput screening technologies for rapid discovery of novel drugs," <i>Cur. Opinion Drug Disc. Dev.</i> , 1998, 1(1), 92-97	
	CA	Hodgson, J., "Receptor screening and the search for new pharmaceuticals," <i>Bio/Technology</i> , 1992, 10, 973-980	
	CB	Hoogenboom H. R., "Designing and optimizing library selection strategies for generating high-affinity antibodies," <i>TIBTECH</i> , 1997, 15, 62-70	
	CC	Jayawickreme, C. K., et al., "Gene expression systems in the development of high-throughput screens," <i>Current Opinion in Biotechnology</i> , 1997, 8, 629-634	
	CD	Jones, P. T., et al., "Replacing the complementarity-determining regions in a human antibody with those from a mouse," <i>Nature</i> , 1986, 321, 522-525	
	CE	Karlin, S., et al., "Applications and statistics for multiple high-scoring segments in molecular sequences," <i>Proc. Natl. Acad. Sci. USA</i> , 1993, 90, 5873-5787	
	CF	Kettleborough, C. A., et al., "Humanization of a mouse monoclonal antibody by CDR-grafting: the importance of framework residues on loop conformation," <i>Protein Engin.</i> , 1991, 4(7), 773-783	
	CG	Kieleczawa, J., et al., "DNA sequencing by primer walking with strings of contiguous hexamers," <i>Science</i> , 1992, 258, 1787-1791	
	CH	Kim, J., et al., "Design of TATA box-binding protein/zinc finger fusions for targeted regulation of gene expression," <i>Proc. Natl. Acad. Sci. USA</i> , 1997, 94, 3616-3620	
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	CI	Kruse et al. (eds.), in <i>Tissue Culture</i> , Academic Press, 1973	
	CJ	Kuntzweiler, T. A., et al., "Rapid assessment of ligand actions with nicotinic acetylcholine receptors using calcium dynamics and FLIPR," <i>Drug Development Research</i> , 1998, 44(1), 14-20	
	CK	Lajiness et al., "D2 dopamine receptor stimulation of mitogenesis in transfected chinese hamster ovary cells: relationship to dopamine stimulation of tyrosine phosphorylations", <i>J. Pharm. Exp. Ther.</i> , 1993, 267(3), 1573-1581	
	CL	Lehninger, "Chapter 4, The amino acid building blocks of proteins," <i>Biochemistry</i> , 2 <sup>nd</sup> Ed., 1975, Worth Publishers, Inc., New York, New York, 71-77	
	CM	Lin, A. H., et al., "The oxazolidinone eperezolid binds to the 50S ribosomal subunit and competes with binding of chloramphenicol and lincomycin," <i>Antimicrobial Agents and Chemotherapy</i> , 1997, 41(10), 2127-2131	
	CN	Liu, Q., et al., "Design of polydactyl zinc-finger proteins for unique addressing within complex genomes," <i>Proc. Natl. Acad. Sci. USA</i> , 1997, 94, 5525-5530	
	CO	Luckow, V. A., et al., "Trends in the development of baculovirus expression vectors," <i>Bio/Technology</i> , 1988, 6, 47-55	
	CP	Maxam, A. M., et al., "Sequencing end-labeled DNA with bse-specific chemical cleavages", <i>Meth. Enzymol.</i> , 1977, Vol. 65, 499-560	
	CQ	McColl, D. J., et al., "Structure-based design of an RNA-binding zinc finger", <i>Proc. Natl. Acad. Sci. (USA)</i> , 1997, Vol. 96, 9521-9526	
	CR	Miller, A. D., "Human gene therapy comes of age", <i>Nature</i> , 1992, Vol. 357, pp. 455-460	
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	CS	Mirzabekov, A. D., "DNA sequencing by hybridization - A megasequencing method and a diagnostic tool?", <i>TIBTECH</i> , 1994, Vol. 12, 27-32	
	CT	Morrison, et al., "Genetically engineered antibody molecules," Dixon, F.J., et al. (Eds.), <i>Adv. Immunol.</i> , 1989, 44, 65-92	
	CU	Murphy, A. J., et al., "From DNA to drugs: the orphan G-protein coupled receptors," <i>Cur. Opinion Drug Disc. Dev.</i> , 1998, 1(2), 192-199	
	CV	Myers, P., "Will combinatorial chemistry deliver real medicines," <i>Curr. Opin. Biotechnology</i> , 1997, 8, 701-707	
	CW	Myers, R. M., et al., "Detection of single base substitutions by ribonuclease cleavage at mismatches in RNA: DNA duplexes", <i>Science</i> , 1985, Vol. 230,1242-1246	
	CX	Nakayama, G. R., "Microplate assays for high-throughput screening," <i>Cur. Opinion Drug Disc. Dev.</i> , 1998, 1(1), 85-91	
*	CY	O'Rielly, et al. (Eds.), <i>Baculovirus Expression Vectors: A Laboratory Manual</i> , 1992, W.H. Freeman and Company, New York	
	CZ	Okayama, H., et al., "A cDNA cloning vector that permits expression of cDNA inserts in mammalian cells," <i>Mol. Cell. Biol.</i> , 1983, 3(2), 280-289	
	DA	Orita, M., et al., "Detection of polymorphisms of human DNA by gel electrophoresis as single-strand conformation polymorphisms," <i>Proc. Natl. Acad. Sci. USA</i> , 1989, 86, 2766-2770	
*	DB	Osol, A. (Ed.), <i>Remington's Pharmaceutical Sciences</i> , 16 <sup>th</sup> Ed., 1980	
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	DC	Padlan, E. A., "A possible procedure for reducing the immunogenicity of antibody variable domains while preserving their ligand-binding properties," <i>Molecular Immunol.</i> , 1991, 28(4/5), 489-498	
	DD	Parodi, L. A., et al., "A consensus procedure for predicting the location of $\alpha$ -helical transmembrane segments in proteins," <i>Comput. Appl. Biosci.</i> , 1994, 10(5), 527-535	
	DE	Pastinen, T., et al., "Minisequencing: A specific tool for DNA analysis and diagnostics on oligonucleotide arrays," <i>Genome Res.</i> , 1997, 7, 606-614	
	DF	Pausch, M. H., "G-protein-coupled receptors in saccharomyces cerevisiae: high-throughput screening assays for drug discovery," <i>Trends in Biotechnology</i> , 1997, 15, 487-494	
	DG	Pease, A. C., et al., "Light-generated oligonucleotide arrays for rapid DNA sequence analysis," <i>Proc. Natl. Acad. Sci. USA</i> , 1994, 91, 5022-5026	
	DH	Pindon, A., et al., "Thrombin-induced reversal of astricyte stellation is mediated by activation of protein kinase C $\beta$ -1," <i>Eur. J. Biochem.</i> , 1998, 255, 766-774	
	DI	Rader, C., et al., "Phage display of combinatorial antibody libraries," <i>Curr. Opin. Biotechnol.</i> , 1997, 8, 503-508	
	DJ	Ramsay, G., "DNA chips: state-of-the-art," <i>Nature Biotechnology</i> , 1999, 16, 40-48	
	DK	Riechmann, L., et al., "Reshaping human antibodies for therapy," <i>Nature</i> , 1988, 332, 323-327	
	DL	Riesner, D., et al., "Temperature-gradient gel electrophoresis of nucleic acids: Analysis of conformational transitions, sequence variations, and protein-nucleic acid interactions," <i>Electrophoresis</i> , 1989, 10, 377-389	
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	DM	Roberts, E., et al., "Potassium permanganate and tetraethylammonium chloride are a safe and effective substitute for osmium tetroxide in solid-phase fluorescent chemical cleavage of mismatch," <i>Nucl. Acids Res.</i> , 1997, 25(16), 3377-3378	
	DN	Rogers, M. V., "Light on high-throughput screening: fluorescence-based assay technologies," <i>Drug Discovery Today</i> , 1997, 2(4), 156-160	
	DO	Rowley, G., et al., "Ultrarapid mutation detection by multiplex solid-phase chemical cleavage," <i>Genomics</i> , 1995, 30, 574-582	
*	DP	Sambrook, et al., <i>Molecular Cloning: A Laboratory Manual</i> , 2 <sup>nd</sup> Ed., 1989, Cold Spring Harbor press, Cold Spring Harbor, New York	
*	DQ	Sambrook, et al., (Eds.), <i>Molecular Cloning: A Laboratory Manual</i> , 1989, Cold Spring Harbor Laboratory Press: Cold Spring Harbor, New York, 9.47-9.51	
*	DR	Sambrook, et al., <i>Antibodies A Laboratory Manual</i> , 1989, Cold Spring Harbor Laboratory; Cold Spring Harbor, New York	
	DS	Sanger, F., et al., "DNA sequencing with chain-terminating inhibitors," <i>Proc. Natl. Acad. Sci. USA</i> , 1977, 74(12), 5463-5467	
	DT	Schaefer, A. J. et al., "DNA variation and the future of human genetics," <i>Nature Biotechnology</i> , Jan. 1998, 16, 33-39	
	DU	Schroeder, K. S., et al., "FLIPR: A new instrument for accurate, high throughput optical screening," <i>J. Biomolecular Screening</i> , 1996, 1(2), 75-80	
	DV	Segal, D. J., et al., "Toward controlling gene expression at will: Selection and design of zinc finger domains recognizing each of the 5'-GNN-3' DNA target sequences," <i>Proc. Natl. Acad. Sci. USA</i> , 1999, 96, 2758-2763	
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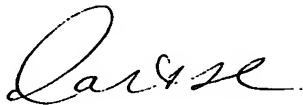
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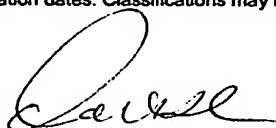
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